

6. (Previously Presented) A method according to Claim 1, wherein 5' deoxyribose moieties downstream of the 3'terminus of the upstream fragment are removed so that the upstream fragment can be extended on the template.

7. (Original) A method according to Claim 6, wherein the 5'deoxyribose moieties are removed by a 5'deoxyribophosphodiesterase.

8. (Previously Presented) A method according to Claim 1, wherein the modified base is introduced by enzymatic amplification of the DNA.

9. (Original) A method according to Claim 8, wherein the amplified strands are separated for a separate analysis of the respective strands.

10. (Previously Presented) A method according to Claim 8, wherein a primer or one or more nucleotide (s) involved in the enzymatic amplification is labelled.

11. (Previously Presented) A method according to Claim 1, wherein the enzyme is a polymerase.

12. (Previously Presented) A method according to Claim 11, wherein the extendible upstream fragment is incubated in step iv) with the polymerase in the presence of one or more nucleotide (s).

13. (Original) A method according to Claim 12, wherein one or more of the nucleotide (s) of step iv) is a dideoxy nucleotide.

14. (Previously Presented) A method according to Claim 12, wherein one or more of the nucleotide (s) of step iv) is labelled.

15. (Previously Presented) A method according to Claim 11, wherein the extension of step iv) is achieved by means of an amplification reaction using said extendible DNA fragment.

16. (Previously Presented) A method according to Claim 11, wherein the extension of step iv) is achieved by means of an amplification reaction including a primer in addition to using said extendible DNA fragment.

17. (Previously Presented) A method according to Claim 1, wherein the enzyme is a ligase.

18. (Original) A method according to Claim 17, wherein the extendible upstream fragment is incubated with the ligase in the presence of a reporter oligonucleotide.

19. (Original) A method according to Claim 18, wherein the reporter oligonucleotide is partially degenerate.

20. (Previously Presented) A method according to Claim 1, wherein any extended fragments resulting from step iv) are detected by hybridisation.

21. (Previously Presented) A method according to Claim 1, which is used to detect a known or unknown mutation.

22. (Cancelled)

23. (Previously Presented) A method according to Claim 1, wherein the method is used to analyse the CpG content of DNA by detecting C to T transitions in DNA.

24. (Cancelled)